

SEQUENCE LISTING

<110> Patience, Clive

<120> Gamma Herpes Virus DNA and Methods of Use

<130> 61750-379

<150> US/09/612,204

<151> 2000-07-07

<150> US/60/142,736

<151> 1999-07-08

<150> US/60/168,532

<151> 1999-12-02

<160> 55

<170> PatentIn version 3.0

<210> 1

<211> 585

<212> DNA

<213> artificial

<220>

<223> Fragment from Swine Gamma Herpesvirus DNA coding for glycoprotein B envelope protein

<400> 1

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gaaacatgtc aggaaaacac tgagtattac tttcaggcaa agacagacat gtacattttac      420
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20050914 14:55:01

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Ala Ser Asp Glu Lys Cys Phe Ser Arg Pro Pro Val Thr Phe Lys Phe		
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Ile Leu Leu Thr Thr Thr Tyr Leu Glu Thr Cys Gln Glu Asn Thr Glu		
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130	135	140
His Leu Lys Thr Val Pro Leu Ser Ser Ile Thr Thr Leu Asp Thr Phe		
145	150	155
Ile Ala Leu Asn Phe Thr Leu Leu Glu Asn Val Asp Phe Lys Val Ile		
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<210> 22
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<220>
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<400> 22
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2025-04-14 16:50:44

<210> 24
 <211> 865
 <212> PRT
 <213> artificial

<220>

<223> Deduced amino acid sequence of porcine gamma herpesvirus gpB gene

<400> 24

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 35 40 45

Gly His Tyr Gly Thr His Asp Ser Ser His Gly Glu Arg Gly Asn Asn
 50 55 60

Glu Asn Arg Asp Ser Glu Glu Gln Asn Lys Asn Ile Tyr Gly Ser Pro
 65 70 75 80

Ser Thr Phe Pro Tyr Arg Val Cys Ser Ala Ser Gly Val Gly Asp Val
 85 90 95

Phe Arg Phe Gln Thr Asp His Val Cys Pro Asp Ala Ser Asp Met Val
 100 105 110

His Ser Glu Gly Ile Leu Leu Ile Tyr Lys Gln Asn Ile Ile Pro Phe
 115 120 125

Met Phe Arg Val Arg Lys Tyr Arg Lys Val Val Thr Thr Ser Thr Val
 130 135 140

Tyr Asn Gly Ile Tyr Ser Asp Ser Ile Thr Asn Gln His Thr Phe Tyr
 145 150 155 160

Lys Ser Ile Glu Pro Trp Glu Thr Glu Lys Met Asp Thr Ile Tyr Gln
 165 170 175

Cys Phe Asn Ser Leu Arg Leu Asn Thr Gly Gly Asn Leu Leu Thr Tyr
 180 185 190

Val Asp Arg Asp Asp Ile Asn Met Thr Val Phe Leu Gln Pro Val Asp
 195 200 205

Gly Val Thr Pro Asp Val Lys Arg Tyr Gly Ser Gln Pro Glu Leu Tyr
 210 215 220

Leu Glu Pro Gly Trp Phe Trp Gly Ser Tyr Arg Arg Arg Thr Thr Val
 225 230 235 240

Asn Cys Glu Leu Met Asp Met Phe Ala Arg Ser Asn Pro Pro Phe Asp
 245 250 255

Phe Phe Val Thr Ala Thr Gly Asp Thr Val Glu Met Ser Pro Phe Trp
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 Ser Gly Glu Asp Asp His Glu Asn Lys Met His Glu Lys Pro Trp Phe
 275 280 285
 Val Ser Val Ile Asn Asn Tyr Lys Val Val Asp Tyr Gln Asn Arg Gly
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 Thr Val Pro Leu Gly Lys Thr Arg Ile Phe Leu Asp Arg Glu Glu Tyr
 305 310 315 320
 Thr Leu Ser Trp Glu Lys His Leu Lys Asn Met Ser Tyr Cys Pro Leu
 325 330 335
 Thr Leu Trp Lys Ala Phe Tyr Asn Gly Ile Gln Thr Glu His Ser Gly
 340 345 350
 Ser Tyr His Phe Val Ala Asn Asp Ile Thr Ala Ser Phe Thr Thr Ser
 355 360 365
 Lys Glu Asp Met Lys Glu Phe Asn Thr Thr Tyr His Cys Leu Asn Glu
 370 375 380
 Glu Ile Lys Ala Glu Ile Glu Lys Lys Tyr Ala Lys Val Asn Ser Thr
 385 390 395 400
 His Ser Lys Tyr Gly Asp Leu Lys Tyr Phe Lys Thr Asp Gly Gly Leu
 405 410 415
 Tyr Leu Val Trp Gln Pro Leu Ile Gln Asn Arg Leu Leu Asp Ala Lys
 420 425 430
 Asn Lys Leu Asn Asn Glu Thr Tyr Ser Arg Arg Ser Arg Arg Gln Ala
 435 440 445
 Glu Ser Thr Thr Asp Pro Met Met Glu Met Thr Gly Asn Gly Ala Gly
 450 455 460
 Gly Glu Tyr Ser Ser Glu Asn Ser Ile Thr Val Ala Gln Val Gln Tyr
 465 470 475 480
 Ala Tyr Asp Asn Leu Arg Ile Arg Ile Asn Asn Ile Leu Glu Asp Leu
 485 490 495
 Ser Lys Ala Trp Cys Arg Glu Gln His Arg Ala Ala Leu Val Trp Asn
 500 505 510
 Glu Leu Ser Lys Ile Asn Pro Thr Ser Val Met Ser Met Ile Tyr Asn
 515 520 525
 Arg Pro Val Ser Ala Lys Arg Ile Gly Asp Val Ile Ser Val Ser Asn
 530 535 540
 Cys Ile Val Val Asp Gln Thr Ser Val Ser Leu His Lys Ser Leu Arg
 545 550 555 560

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Gln	Phe	Val	Asp	Ala	Phe	Gly	Ser	Leu	Met	Asp	Asp	Leu	Gly	Ala	Val		
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Gly	Gln	Thr	Val	Val	Asn	Ala	Val	Ser	Gly	Val	Ala	Thr	Leu	Phe	Ser		
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Ser	Ile	Val	Thr	Gly	Phe	Ile	Asn	Phe	Ile	Lys	Asn	Pro	Phe	Gly	Gly		
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Ala	Pro	Ile	Ser	Glu	Glu	Glu	Leu	Glu	Arg	Ile	Val	Leu	Ala	Met	His		
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Leu
865

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<223> Sequencing primer for TOPO-pCRII: bases 434-458

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24

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17

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<220>

<223> Sequencing primer for porcine gamma herpesvirus gpB gene: bases
1989-2008

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<220>

<223> Sequencing primer for porcine gamma herpesvirus gpB gene: bases
1513-1531

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19

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 2399-2422

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<220>
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<210> 32
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 537-560

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<220>
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 815-835

<400> 33

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<220>
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993-1017

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<220>
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1073-1093

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<220>
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1673-1694

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<210> 37
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<212> PRT
<213> Human herpesvirus 8

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Thr Ser Ser Ser Pro Thr Pro Pro Gly Ser Ser Ser Lys Ala Pro Thr
35 40 45

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 Gly Leu Arg Glu Asp Leu Asp Asn Thr Ile Asp Met Asn Lys Glu Arg
 675 680 685
 Phe Val Arg Asp Leu Ser Glu Ile Val Ala Asp Leu Gly Gly Ile Gly
 690 695 700
 Lys Thr Val Val Asn Val Ala Ser Ser Val Val Thr Leu Cys Gly Ser
 705 710 715 720
 Leu Val Thr Gly Phe Ile Asn Phe Ile Lys His Pro Leu Gly Gly Met
 725 730 735
 Leu Met Ile Ile Ile Val Ile Ala Ile Ile Leu Ile Ile Phe Met Leu
 740 745 750
 Ser Arg Arg Thr Asn Thr Ile Ala Gln Ala Pro Val Lys Met Ile Tyr
 755 760 765
 Pro Asp Val Asp Arg Arg Ala Pro Pro Ser Gly Gly Ala Pro Thr Arg
 770 775 780
 Glu Glu Ile Lys Asn Ile Leu Leu Gly Met His Gln Leu Gln Gln Glu
 785 790 795 800
 Arg Gln Lys Ala Asp Asp Leu Lys Lys Ser Thr Pro Ser Val Phe Gln
 805 810 815
 Arg Thr Ala Asn Gly Leu Arg
 820
 <210> 38
 <211> 808
 <212> PRT
 <213> Rhesus monkey rhadinovirus
 <400> 38
 Met Met Ile Thr Asn Arg Thr Arg Arg Leu Leu Arg Ala Trp Val Val
 1 5 10 15
 Ile Ile Ala Ile Gly Thr Ala Val Gly Glu Asn Val Thr Thr Pro Lys
 20 25 30
 Gly Ala Thr Thr Thr Ala Lys Pro Thr Pro Gly Pro Ser Thr Pro Thr
 35 40 45
 Pro Pro Glu Asn Pro Pro Arg Ala Glu Ala Phe Lys Phe Arg Val Cys
 50 55 60
 Ser Ala Ser Ala Thr Gly Glu Leu Phe Arg Phe Asn Leu Glu Lys Thr
 65 70 75 80
 Cys Pro Gly Thr Glu Asp Lys Thr His Gln Glu Gly Ile Leu Met Val
 85 90 95

Phe	Lys	Lys	Asn	Ile	Val	Pro	His	Ile	Phe	Lys	Val	Arg	Arg	Tyr	Arg				
			100					105						110					
Lys	Val	Ala	Thr	Ser	Val	Thr	Val	Tyr	Arg	Gly	Trp	Thr	Glu	Thr	Ala				
		115					120					125							
Val	Thr	Gly	Lys	Gln	Glu	Val	Ile	Arg	Pro	Val	Pro	Gln	Tyr	Glu	Ile				
	130					135					140								
Asn	His	Met	Asp	Thr	Thr	Tyr	Gln	Cys	Phe	Ser	Ser	Met	Arg	Val	Asn				
145					150					155					160				
Val	Asn	Gly	Ile	Val	Asn	Thr	Tyr	Thr	Asp	Arg	Asp	Phe	Thr	Asn	Gln				
			165						170					175					
Thr	Val	Phe	Leu	Gln	Pro	Val	Glu	Gly	Leu	Thr	Asp	Asn	Ile	Gln	Arg				
		180						185					190						
Tyr	Phe	Ser	Gln	Pro	Val	Leu	Tyr	Thr	Thr	Pro	Gly	Trp	Phe	Pro	Gly				
	195					200						205							
Ile	Tyr	Arg	Val	Arg	Thr	Thr	Val	Asn	Cys	Glu	Ile	Val	Asp	Met	Ile				
	210					215					220								
Ala	Arg	Ser	Ala	Glu	Pro	Tyr	Ser	Tyr	Phe	Val	Thr	Ala	Leu	Gly	Asp				
225					230					235				240					
Thr	Val	Glu	Val	Ser	Pro	Phe	Cys	His	Asn	Asp	Ser	Thr	Cys	Ser	Val				
			245					250						255					
Ala	Glu	Lys	Thr	Glu	Asn	Gly	Leu	Gly	Ala	Arg	Val	Leu	Thr	Asn	Tyr				
		260					265					270							
Thr	Met	Val	Asp	Phe	Ala	Thr	Arg	Ala	Pro	Thr	Thr	Glu	Thr	Arg	Val				
	275						280					285							
Phe	Ala	Asp	Ser	Gly	Glu	Tyr	Thr	Val	Ser	Trp	Lys	Ala	Glu	Asp	Pro				
	290					295					300								
Lys	Ser	Ala	Val	Cys	Ala	Leu	Thr	Leu	Trp	Lys	Thr	Phe	Pro	Arg	Ala				
305					310					315					320				
Ile	Gln	Thr	Thr	His	Glu	Ala	Ser	Tyr	His	Phe	Val	Ala	Asn	Asp	Val				
			325						330					335					
Thr	Ala	Thr	Phe	Thr	Ser	Pro	Leu	Ser	Glu	Val	Ala	Asn	Phe	Thr	Gly				
		340					345						350						
Thr	Tyr	Ser	Cys	Leu	Asp	Glu	Val	Ile	Gln	Lys	Thr	Leu	Asn	Asp	Thr				
	355					360						365							
Ile	Lys	Lys	Leu	Ser	Asp	Thr	His	Val	Thr	Asn	Gly	Ser	Ala	Gln	Tyr				
	370				375						380								
Tyr	Lys	Thr	Glu	Gly	Gly	Leu	Phe	Leu	Leu	Trp	Gln	Pro	Leu	Thr	Pro				
385					390					395					400				

Leu	Ser	Leu	Val	Asp	Glu	Met	Arg	Gly	Leu	Asn	Gly	Thr	Thr	Pro	Ala	405	410	415	
Pro	Pro	Ala	Thr	Thr	Ser	Thr	Val	Ser	Arg	Val	Arg	Arg	Ser	Val	Asn	420	425	430	
Thr	Asn	Glu	Gln	Ala	Thr	Asp	Asn	Leu	Ala	Ala	Pro	Gln	Leu	Gln	Phe	435	440	445	
Ala	Tyr	Asp	Lys	Leu	Arg	Ala	Ser	Ile	Asn	Lys	Val	Leu	Glu	Glu	Leu	450	455	460	
Ser	Arg	Ala	Trp	Cys	Arg	Glu	Gln	Val	Arg	Asp	Thr	Tyr	Met	Trp	Tyr	465	470	475	480
Glu	Leu	Ser	Lys	Ile	Asn	Pro	Thr	Ser	Val	Met	Thr	Ala	Ile	Tyr	Gly	485	490	495	
Arg	Pro	Val	Ser	Ala	Lys	Phe	Val	Gly	Asp	Ala	Ile	Ser	Val	Thr	Asp	500	505	510	
Cys	Val	Ala	Val	Asp	Gln	Ala	Ser	Val	Ser	Ile	His	Lys	Ser	Leu	Arg	515	520	525	
Thr	Ser	Thr	Pro	Gly	Met	Cys	Tyr	Ser	Arg	Pro	Pro	Val	Thr	Phe	Arg	530	535	540	
Phe	Leu	Asn	Ser	Thr	Thr	Leu	Phe	Lys	Gly	Gln	Leu	Gly	Pro	Arg	Asn	545	550	555	560
Glu	Ile	Ile	Leu	Thr	Asp	Asn	Gln	Val	Glu	Ala	Cys	Lys	Glu	Thr	Cys	565	570	575	
Glu	His	Tyr	Phe	Ile	Ala	Ser	Asn	Val	Thr	Tyr	Tyr	Tyr	Lys	Asp	Tyr	580	585	590	
Val	Phe	Val	Lys	Lys	Ile	Asn	Thr	Ser	Glu	Ile	Ser	Thr	Leu	Gly	Thr	595	600	605	
Phe	Ile	Ala	Leu	Asn	Leu	Ser	Phe	Ile	Glu	Asn	Ile	Asp	Phe	Arg	Val	610	615	620	
Ile	Glu	Leu	Tyr	Ser	Arg	Ala	Glu	Lys	Lys	Leu	Ser	Gly	Ser	Val	Phe	625	630	635	640
Asp	Ile	Glu	Thr	Met	Phe	Arg	Glu	Tyr	Asn	Tyr	Tyr	Thr	Gln	Arg	Leu	645	650	655	
Ala	Gly	Leu	Arg	Glu	Asp	Leu	Asp	Asn	Thr	Ile	Asp	Leu	Asn	Arg	Asp	660	665	670	
Arg	Leu	Ala	Arg	Asp	Leu	Ser	Glu	Ile	Val	Ala	Asp	Leu	Gly	Asp	Val	675	680	685	
Gly	Arg	Thr	Val	Val	Asn	Val	Ala	Ser	Ser	Val	Ile	Thr	Leu	Phe	Gly	690	695	700	

Ser Ile Val Ser Gly Phe Ile Asn Phe Ile Lys Ser Pro Phe Gly Gly
 705 710 715 720
 Met Leu Met Ile Leu Val Ile Val Ala Val Val Leu Ile Val Phe Ala
 725 730 735
 Leu Asn Arg Arg Thr Asn Ala Ile Ala Gln Ala Pro Ile Arg Met Ile
 740 745 750
 Tyr Pro Asp Ile Asp Lys Met Gln Pro Ser Gly Gly Lys Val Asp Gln
 755 760 765
 Glu Gln Ile Lys Asn Ile Leu Ala Gly Met His Gln Leu Gln Gln Glu
 770 775 780
 Glu Arg Arg Arg Leu Asp Glu Gln Gln Arg Ser Ala Pro Ser Leu Phe
 785 790 795 800
 Arg Arg Ala Ser Asp Gly Leu Lys
 805

<210> 39
 <211> 831
 <212> PRT
 <213> Murine herpesvirus 68

<400> 39
 Met Tyr Pro Thr Val Lys Ser Met Arg Val Ala His Leu Thr Asn Leu
 1 5 10 15
 Leu Thr Leu Leu Cys Leu Leu Cys His Thr His Leu Tyr Val Cys Gln
 20 25 30
 Pro Thr Thr Leu Arg Gln Pro Ser Asp Met Thr Pro Ala Gln Asp Ala
 35 40 45
 Pro Thr Glu Thr Pro Pro Pro Leu Ser Thr Asn Thr Asn Arg Gly Phe
 50 55 60
 Glu Tyr Phe Arg Val Cys Gly Val Ala Ala Thr Gly Glu Thr Phe Arg
 65 70 75 80
 Phe Asp Leu Asp Lys Thr Cys Pro Ser Thr Gln Asp Lys Lys His Val
 85 90 95
 Glu Gly Ile Leu Leu Val Tyr Lys Ile Asn Ile Val Pro Tyr Ile Phe
 100 105 110
 Lys Ile Arg Arg Tyr Arg Lys Ile Ile Thr Gln Leu Thr Ile Trp Arg
 115 120 125
 Gly Leu Thr Thr Ser Ser Val Thr Gly Lys Phe Glu Met Ala Thr Gln
 130 135 140
 Ala His Glu Trp Glu Val Gly Asp Phe Asp Ser Ile Tyr Gln Cys Tyr
 145 150 155 160

Ser Val Glu Asn Tyr Ala Ala Arg Gln Ala Pro Pro Pro Tyr Ser Ala
770 775 780

Ser Pro Pro Ala Ile Asp Lys Glu Glu Ile Lys Arg Ile Leu Leu Gly
785 790 795 800

Met His Gln Val His Gln Glu Glu Lys Glu Ala Gln Lys Gln Leu Thr
805 810 815

Asn Ser Gly Pro Thr Leu Trp Gln Lys Ala Thr Gly Phe Leu Arg
820 825 830

<210> 40

<211> 844

<212> PRT

<213> Bovine herpesvirus 4

<400> 40

Tyr Tyr Lys Thr Ile Leu Phe Phe Ala Leu Ile Lys Val Cys Ser Phe
1 5 10 15

Asn Gln Thr Thr Thr His Ser Thr Thr Thr Ser Pro Ser Ile Ser Ser
20 25 30

Thr Thr Ser Ser Thr Thr Thr Ser Thr Ser Lys Pro Ser Asn Thr Thr
35 40 45

Ser Thr Asn Ser Ser Leu Ala Ala Ser Pro Gln Asn Thr Ser Thr Ser
50 55 60

Lys Pro Ser Thr Asp Asn Gln Gly Thr Ser Thr Pro Thr Ile Pro Thr
65 70 75 80

Val Thr Asp Asp Thr Ala Ser Lys Asn Phe Tyr Lys Tyr Arg Val Cys
85 90 95

Ser Ala Ser Ser Ser Ser Gly Glu Leu Phe Arg Phe Asp Leu Asp Gln
100 105 110

Thr Cys Pro Asp Thr Lys Asp Lys Lys His Val Glu Gly Ile Leu Leu
115 120 125

Val Leu Lys Lys Asn Ile Val Pro Tyr Ile Phe Lys Val Arg Lys Tyr
130 135 140

Arg Lys Ile Ala Thr Ser Val Thr Val Tyr Arg Gly Trp Ser Gln Ala
145 150 155 160

Ala Val Thr Asn Arg Asp Asp Ile Ser Arg Ala Ile Pro Tyr Asn Glu
165 170 175

Ile Ser Met Ile Asp Arg Thr Tyr His Cys Phe Ser Ala Met Ala Thr
180 185 190

Val Ile Asn Gly Ile Leu Asn Thr Tyr Ile Asp Arg Asp Ser Glu Asn
195 200 205

Met	Trp	Tyr	Glu	Leu	Ser	Lys	Ile	Asn	Pro	Val	Ser	Val	Met	Ala	Ala		
		515					520					525					
Ile	Tyr	Gly	Lys	Pro	Val	Ala	Val	Lys	Ala	Met	Gly	Asp	Ala	Phe	Met		
	530					535					540						
Val	Ser	Glu	Cys	Ile	Asn	Val	Asp	Gln	Ala	Ser	Val	Asn	Ile	His	Lys		
545					550					555					560		
Ser	Met	Arg	Thr	Asp	Asp	Pro	Lys	Val	Cys	Tyr	Ser	Arg	Pro	Leu	Val		
				565					570					575			
Thr	Phe	Lys	Phe	Val	Asn	Ser	Thr	Ala	Thr	Phe	Arg	Gly	Gln	Leu	Gly		
			580					585					590				
Thr	Arg	Asn	Glu	Ile	Leu	Leu	Thr	Asn	Thr	His	Val	Glu	Thr	Cys	Arg		
		595					600					605					
Pro	Thr	Ala	Asp	His	Tyr	Phe	Phe	Val	Lys	Asn	Met	Thr	His	Tyr	Phe		
	610					615					620						
Lys	Asp	Tyr	Lys	Phe	Val	Lys	Thr	Met	Asp	Thr	Asn	Asn	Ile	Ser	Thr		
625					630					635					640		
Leu	Asp	Thr	Phe	Leu	Thr	Leu	Asn	Leu	Thr	Phe	Ile	Asp	Asn	Ile	Asp		
				645					650					655			
Phe	Lys	Thr	Val	Glu	Leu	Tyr	Ser	Glu	Thr	Glu	Arg	Lys	Met	Ala	Ser		
			660					665					670				
Ala	Leu	Asp	Leu	Glu	Thr	Met	Phe	Arg	Glu	Tyr	Asn	Tyr	Tyr	Thr	Gln		
		675					680					685					
Lys	Leu	Ala	Ser	Leu	Arg	Glu	Asp	Leu	Asp	Asn	Thr	Ile	Asp	Leu	Asn		
	690					695					700						
Arg	Asp	Arg	Leu	Val	Lys	Asp	Leu	Ser	Glu	Met	Met	Ala	Asp	Leu	Gly		
705					710					715					720		
Asp	Ile	Gly	Lys	Val	Val	Val	Asn	Thr	Phe	Ser	Gly	Ile	Val	Thr	Val		
				725					730					735			
Phe	Gly	Ser	Ile	Val	Gly	Gly	Phe	Val	Ser	Phe	Phe	Thr	Asn	Pro	Ile		
			740					745					750				
Gly	Gly	Val	Thr	Ile	Ile	Leu	Leu	Leu	Ile	Val	Val	Val	Phe	Val	Val		
		755					760					765					
Phe	Ile	Val	Ser	Arg	Arg	Thr	Asn	Asn	Met	Asn	Glu	Ala	Pro	Ile	Lys		
	770					775					780						
Met	Ile	Tyr	Pro	Asn	Ile	Asp	Lys	Ala	Ser	Glu	Gln	Glu	Asn	Ile	Gln		
785					790					795					800		
Pro	Leu	Pro	Gly	Glu	Glu	Ile	Lys	Arg	Ile	Leu	Leu	Gly	Met	His	Gln		
				805					810					815			

Leu Gln Gln Ser Glu His Gly Lys Ser Glu Glu Glu Ala Ser His Lys
820 825 830

Pro Gly Leu Phe Gln Leu Leu Gly Asp Gly Leu Gln
835 840

<210> 41
<211> 791
<212> PRT
<213> Ateline herpesvirus 3

<400> 41
Met Thr Leu Asn Arg Cys Val Leu Leu Ile Val Leu Thr Phe Ser Thr
1 5 10 15

Ala Cys Ser Gln Thr Thr Pro Ala Ser Ser Asp Glu Asn Gly Lys Thr
20 25 30

Pro Ala Ile Glu Lys Glu Tyr Phe Lys Tyr Arg Val Cys Ser Ala Ser
35 40 45

Thr Thr Gly Glu Leu Phe Arg Phe Asn Leu Asp Arg Ala Cys Pro Ser
50 55 60

Thr Glu Asp Lys Val His Arg Glu Gly Ile Leu Leu Val Tyr Lys Lys
65 70 75 80

Asn Ile Val Pro His Ile Phe Lys Val Arg Arg Tyr Lys Lys Ile Ala
85 90 95

Thr Ser Val Arg Ile Phe Asn Gly Trp Ser Arg Glu Gly Val Ala Ile
100 105 110

Thr Asn Lys Trp Glu Leu Ser Arg Ala Val Pro Lys Tyr Glu Ile Asn
115 120 125

Leu Met Asp Lys Asn Tyr Gln Cys His Asn Cys Met Gln Ile Glu Val
130 135 140

Asn Gly Leu Leu Asn Ser Tyr Cys Asp Arg Asp Gly Asn Asn Lys Thr
145 150 155 160

Val Asp Leu Lys Pro Val Asp Gly Leu Thr Gly Ala Ile Thr Arg Tyr
165 170 175

Val Ser Gln Pro Lys Ile Phe Ala Asp Ala Gly Trp Leu Trp Gly Thr
180 185 190

Tyr Lys Thr Arg Thr Thr Val Asn Cys Glu Ile Val Glu Met Phe Ala
195 200 205

Arg Ser Ala Asp Pro Tyr Thr Tyr Phe Val Thr Ala Leu Gly Asp Thr
210 215 220

Val Glu Val Ser Pro Phe Cys Asp Ala Glu Asn Ser Cys Pro Asn Ala
225 230 235 240

Ser	Asp	Val	Leu	Ser	Ser	Gln	Val	Asp	Phe	Asn	His	Thr	Val	Val	Asp	245	250	255	
Tyr	Gly	Asn	Arg	Ala	Thr	Ser	Gln	Gln	His	Gly	Lys	Arg	Ile	Phe	Ala	260	265	270	
His	Thr	Leu	Asp	Tyr	Ser	Val	Ser	Trp	Glu	Ala	Ile	Asn	Lys	Thr	Thr	275	280	285	
Ser	Val	Cys	Ser	Met	Val	Phe	Trp	Lys	Gly	Phe	Gln	Arg	Ala	Ile	Gln	290	295	300	
Thr	Glu	His	Asp	Ser	Thr	Tyr	His	Phe	Ile	Ala	Asn	Glu	Ile	Thr	Ala	305	310	315	320
Gly	Phe	Ser	Thr	Ser	Lys	Glu	Thr	Leu	Ala	Ser	Phe	Ser	Ser	Glu	Tyr	325	330	335	
Ser	Cys	Leu	Met	Ser	Asp	Ile	Asn	Ser	Thr	Leu	Thr	Asp	Lys	Ile	Gly	340	345	350	
Arg	Val	Asn	Asn	Thr	His	Val	Pro	Asn	Gly	Thr	Ala	Gln	Tyr	Phe	Lys	355	360	365	
Thr	Glu	Gly	Gly	Met	Ile	Leu	Val	Trp	Gln	Pro	Leu	Thr	Ala	Ile	Glu	370	375	380	
Leu	Glu	Glu	Ala	Met	Ile	Glu	Ala	Thr	Thr	Val	Ser	Pro	Thr	Pro	Leu	385	390	395	400
Ser	Thr	Ala	His	Leu	Thr	Ser	Arg	Arg	Thr	Gly	Arg	Arg	Lys	Arg	Asp	405	410	415	
Val	Ser	Ala	Gly	Ser	Glu	Asn	Ser	Val	Leu	Leu	Ala	Gln	Ile	Gln	Tyr	420	425	430	
Ala	Tyr	Asp	Lys	Leu	Arg	Gln	Ser	Ile	Asn	Asn	Val	Leu	Glu	Glu	Leu	435	440	445	
Ala	Ile	Thr	Trp	Cys	Arg	Glu	Gln	Val	Arg	Gln	Thr	Met	Ile	Trp	Tyr	450	455	460	
Glu	Ile	Ala	Lys	Ile	Asn	Pro	Thr	Ser	Val	Met	Thr	Ala	Ile	Tyr	Gly	465	470	475	480
Lys	Pro	Val	Ser	Ala	Lys	Ala	Leu	Gly	Asp	Val	Ile	Ser	Val	Thr	Glu	485	490	495	
Cys	Ile	Asn	Val	Asp	Gln	Thr	Ser	Val	Ser	Ile	His	Lys	Ser	Leu	Lys	500	505	510	
Thr	Thr	Asn	Asn	Asp	Val	Cys	Tyr	Ser	Arg	Pro	Pro	Val	Thr	Phe	Lys	515	520	525	
Phe	Val	Asn	Ser	Ser	Gln	Leu	Phe	Lys	Gly	Gln	Leu	Gly	Ala	Arg	Asn	530	535	540	

Glu Ile Leu Leu Ser Glu Ser Leu Val Glu Asn Cys His Gln Asn Ala
545 550 555 560

Glu His Phe Phe Thr Ala Lys Asn Glu Thr Tyr His Phe Lys Asn Tyr
565 570 575

Leu His Val Glu Thr Leu Pro Leu Thr Asn Ile Ser Thr Leu Asp Thr
580 585 590

Phe Leu Ala Leu Asn Leu Thr Phe Ile Glu Asn Ile Asp Phe Lys Ala
595 600 605

Val Glu Leu Tyr Ser Ser Gly Glu Arg Lys Leu Ala Asn Val Phe Asp
610 615 620

Leu Glu Thr Met Phe Arg Glu Tyr Asn Tyr Tyr Ala Gln Ser Ile Ser
625 630 635 640

Gly Leu Arg Lys Asp Phe Asp Asn Ser Gln Arg Asn Asn Arg Asp Arg
645 650 655

Ile Ile Gln Asp Phe Ser Glu Ile Leu Ala Asp Leu Gly Ser Ile Gly
660 665 670

Lys Val Ile Val Asn Ile Ala Ser Ser Ala Phe Ser Leu Phe Gly Gly
675 680 685

Ile Val Thr Gly Ile Leu Asn Phe Ile Lys Asn Pro Leu Gly Gly Met
690 695 700

Leu Thr Phe Leu Leu Val Gly Ala Ile Ile Ile Leu Val Ile Leu Leu
705 710 715 720

Val Arg Arg Thr Asn Asn Met Ser Gln Ala Pro Ile Arg Met Ile Tyr
725 730 735

Pro Asp Ile Glu Lys Ser Arg Ser Ser Val Thr Pro Thr Glu Pro Glu
740 745 750

Val Ile Lys Gln Ile Leu Leu Gly Met His Asn Met Gln Gln Glu Glu
755 760 765

Tyr Lys Lys Arg Glu Glu His Lys Ala Ser Gln Pro Ser Phe Leu Lys
770 775 780

Arg Ala Thr Asp Ala Phe Leu
785 790

<210> 42

<211> 792

<212> PRT

<213> Herpesvirus saimiri

<400> 42

Met Val Pro Asn Lys His Leu Leu Leu Ile Ile Leu Ser Phe Ser Thr
1 5 10 15

Ala	Cys	Gly	Gln	Thr	Thr	Pro	Thr	Thr	Ala	Val	Glu	Lys	Asn	Lys	Thr	20	25	30	
Gln	Ala	Ile	Tyr	Gln	Glu	Tyr	Phe	Lys	Tyr	Arg	Val	Cys	Ser	Ala	Ser	35	40	45	
Thr	Thr	Gly	Glu	Leu	Phe	Arg	Phe	Asp	Leu	Asp	Arg	Thr	Cys	Pro	Ser	50	55	60	
Thr	Glu	Asp	Lys	Val	His	Lys	Glu	Gly	Ile	Leu	Leu	Val	Tyr	Lys	Lys	65	70	75	80
Asn	Ile	Val	Pro	Tyr	Ile	Phe	Lys	Val	Arg	Arg	Tyr	Lys	Lys	Ile	Thr	85	90	95	
Thr	Ser	Val	Arg	Ile	Phe	Asn	Gly	Trp	Thr	Arg	Glu	Gly	Val	Ala	Ile	100	105	110	
Thr	Asn	Lys	Trp	Glu	Leu	Ser	Arg	Ala	Val	Pro	Lys	Tyr	Glu	Ile	Asp	115	120	125	
Ile	Met	Asp	Lys	Thr	Tyr	Gln	Cys	His	Asn	Cys	Met	Gln	Ile	Glu	Val	130	135	140	
Asn	Gly	Met	Leu	Asn	Ser	Tyr	Tyr	Asp	Arg	Asp	Gly	Asn	Asn	Lys	Thr	145	150	155	160
Val	Asp	Leu	Lys	Pro	Val	Asp	Gly	Leu	Thr	Gly	Ala	Ile	Thr	Arg	Tyr	165	170	175	
Ile	Ser	Gln	Pro	Lys	Val	Phe	Ala	Asp	Pro	Gly	Trp	Leu	Trp	Gly	Thr	180	185	190	
Tyr	Arg	Thr	Arg	Thr	Thr	Val	Asn	Cys	Glu	Ile	Val	Asp	Met	Phe	Ala	195	200	205	
Arg	Ser	Ala	Asp	Pro	Tyr	Thr	Tyr	Phe	Val	Thr	Ala	Leu	Gly	Asp	Thr	210	215	220	
Val	Glu	Val	Ser	Pro	Phe	Cys	Asp	Val	Asp	Asn	Ser	Cys	Pro	Asn	Ala	225	230	235	240
Thr	Asp	Val	Leu	Ser	Val	Gln	Ile	Asp	Leu	Asn	His	Thr	Val	Val	Asp	245	250	255	
Tyr	Gly	Asn	Arg	Ala	Thr	Ser	Gln	Gln	His	Lys	Lys	Arg	Ile	Phe	Ala	260	265	270	
His	Thr	Leu	Asp	Tyr	Ser	Val	Ser	Trp	Glu	Ala	Val	Asn	Lys	Ser	Ala	275	280	285	
Ser	Val	Cys	Ser	Met	Val	Phe	Trp	Lys	Ser	Phe	Gln	Arg	Ala	Ile	Gln	290	295	300	
Thr	Glu	His	Asp	Leu	Thr	Tyr	His	Phe	Ile	Ala	Asn	Glu	Ile	Thr	Ala	305	310	315	320

Asp Leu Glu Thr Met Phe Arg Glu Tyr Asn Tyr Tyr Ala Gln Ser Ile
625 630 635 640

Ser Gly Leu Arg Lys Asp Phe Asp Asn Ser Gln Arg Asn Asn Arg Asp
645 650 655

Arg Ile Ile Gln Asp Phe Ser Glu Ile Leu Ala Asp Leu Gly Ser Ile
660 665 670

Gly Lys Val Ile Val Asn Val Ala Ser Gly Ala Phe Ser Leu Phe Gly
675 680 685

Gly Ile Val Thr Gly Ile Leu Asn Phe Ile Lys Asn Pro Leu Gly Gly
690 695 700

Met Phe Thr Phe Leu Leu Ile Gly Ala Val Ile Ile Leu Val Ile Leu
705 710 715 720

Leu Val Arg Arg Thr Asn Asn Met Ser Gln Ala Pro Ile Arg Met Ile
725 730 735

Tyr Pro Asp Val Glu Lys Ser Lys Ser Thr Val Thr Pro Met Glu Pro
740 745 750

Glu Thr Ile Lys Gln Ile Leu Leu Gly Met His Asn Met Gln Gln Glu
755 760 765

Ala Tyr Lys Lys Lys Glu Glu Gln Arg Ala Ala Arg Pro Ser Ile Phe
770 775 780

Arg Gln Ala Ala Glu Thr Phe Leu
785 790

<210> 43
<211> 824
<212> PRT
<213> Equine herpesvirus 2

<400> 43
Met Gly Val Gly Gly Gly Pro Arg Val Val Leu Cys Leu Trp Cys Val
1 5 10 15

Ala Ala Leu Leu Cys Gln Gly Val Ala Gln Glu Val Val Ala Glu Thr
20 25 30

Thr Thr Pro Phe Ala Thr His Arg Pro Glu Val Val Ala Glu Glu Asn
35 40 45

Pro Ala Asn Pro Phe Leu Pro Phe Arg Val Cys Gly Ala Ser Pro Thr
50 55 60

Gly Gly Glu Ile Phe Arg Phe Pro Leu Glu Glu Ser Cys Pro Asn Thr
65 70 75 80

Glu Asp Lys Asp His Ile Glu Gly Ile Ala Leu Ile Tyr Lys Thr Asn
85 90 95

Val Ala Ser Gly Val Phe Ser Leu Phe Gly Ser Ile Val Ser Gly Val
705 710 715 720

Ile Ser Phe Phe Lys Asn Pro Phe Gly Gly Met Leu Leu Ile Val Leu
725 730 735

Ile Ile Ala Gly Val Val Val Val Tyr Leu Phe Met Thr Arg Ser Arg
740 745 750

Ser Ile Tyr Ser Ala Pro Ile Arg Met Leu Tyr Pro Gly Val Glu Arg
755 760 765

Ala Ala Gln Glu Pro Gly Ala His Pro Val Ser Glu Asp Gln Ile Arg
770 775 780

Asn Ile Leu Met Gly Met His Gln Phe Gln Gln Arg Gln Arg Ala Glu
785 790 795 800

Glu Glu Ala Arg Arg Glu Glu Glu Val Lys Gly Lys Arg Thr Leu Phe
805 810 815

Glu Val Ile Arg Asp Ser Ala Thr
820

<210> 44

<211> 818

<212> PRT

<213> Equine herpesvirus 5

<400> 44

Met Val Ala Trp Phe Gly Leu Trp Gly Phe Ala Arg Leu Met Ala Thr
1 5 10 15

Leu Ala Leu Leu Cys Gly Arg Val Ala Leu Asp Glu Ser Ser Ala Thr
20 25 30

Pro Ser Ile Pro Pro Thr His Lys Pro Ala Val His His Glu Asp Asn
35 40 45

Thr Thr Asn Pro Phe Leu Leu Phe Arg Val Cys Gly Ala Ser Pro Thr
50 55 60

Gly Glu Ile Phe Arg Phe Pro Leu Glu Glu Asn Cys Pro Asn Thr Glu
65 70 75 80

Asp Lys Glu His Val Glu Gly Ile Leu Leu Ile Tyr Lys Thr Asn Ile
85 90 95

Val Pro Tyr Ile Phe Asn Val Arg Lys Tyr Arg Lys Leu Val Thr Ser
100 105 110

Thr Thr Ile Tyr Lys Gly Trp Ser Gln Asp Ala Ile Thr Asn Gln Tyr
115 120 125

Thr Ser Ser Phe Ala Met Pro Leu Trp Glu Ala Arg Leu Val Asp Tyr
130 135 140

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Asn	Tyr	Glu	Cys	Tyr	Asn	Gly	Ile	Gln	Val	Thr	Glu	Asn	Gly	His	Leu	145	150	155	160
Thr	Thr	Tyr	Val	Asp	Arg	Asp	Gly	Tyr	Asn	Glu	Ser	Val	Arg	Leu	Val	165	170		175
Pro	Ala	Asp	Gly	Leu	Thr	Ser	Ser	Ile	Arg	Arg	Tyr	His	Ser	Gln	Pro	180	185		190
Glu	Leu	Tyr	Val	Thr	Pro	Arg	Asn	Leu	Leu	Trp	Ser	Tyr	Thr	Thr	Arg	195	200		205
Thr	Thr	Val	Asn	Cys	Glu	Val	Ile	Asp	Met	Thr	Ala	Arg	Ser	His	Lys	210	215		220
Pro	Phe	Glu	Tyr	Phe	Val	Thr	Ala	Ser	Gly	Asp	Ser	Ile	Glu	Thr	Ser	225	230	235	240
Pro	Phe	Tyr	Thr	Asn	Ala	Ser	Arg	Arg	Val	Pro	Val	Gln	Val	Leu	Tyr	245	250		255
Asn	Tyr	Ser	Val	Thr	Asp	Tyr	Gly	Val	Gly	Leu	Gly	Ser	Gly	Glu	Asn	260	265		270
Val	Thr	Arg	Phe	Phe	Ala	Thr	Leu	Asn	Asp	Phe	Ser	Ile	Ser	Trp	Lys	275	280		285
Ala	Ala	Thr	Glu	Asn	Ser	Ser	Tyr	Cys	Pro	Leu	Val	Leu	Trp	Lys	Gly	290	295		300
Phe	Pro	Ser	Ala	Ile	Gln	Thr	Lys	His	Glu	Lys	Ser	Tyr	His	Phe	Ile	305	310	315	320
Ala	Asp	Ala	Val	Thr	Ala	Ser	Phe	Thr	Thr	Pro	Leu	Thr	Asp	Glu	Thr	325	330		335
Ser	Tyr	Phe	Asn	Thr	Thr	Tyr	Gln	Cys	Ala	Trp	Gln	Asp	Ile	Glu	Gly	340	345		350
Glu	Ile	Gln	Lys	Arg	Phe	Asp	Pro	Val	Ser	Lys	Thr	His	Ala	Arg	Asn	355	360		365
Gly	Ser	Val	Gln	Ile	Tyr	Lys	Thr	Ser	Gly	Asn	Leu	Tyr	Val	Val	Trp	370	375		380
Gln	Pro	Leu	Val	Gln	Leu	Asp	Leu	Leu	Ala	Ala	His	Ala	Lys	Thr	Ile	385	390	395	400
Asn	Ser	Thr	Asp	Asn	Ser	Thr	Ser	Pro	Thr	Thr	Ala	Pro	Asn	Thr	Thr	405	410		415
Thr	Ser	Thr	Ser	Ser	Arg	Arg	Lys	Arg	Arg	Asp	Thr	Gly	Asn	Thr	Ala	420	425		430
Thr	Asn	Asn	Ser	Ser	Ser	Asn	Asn	Ser	Ser	Met	Glu	Glu	Asn	Leu	Ala	435	440		445

Thr	Ser	Gln	Val	Gln	Phe	Ala	Tyr	Asp	Gln	Leu	Arg	Lys	Ser	Ile	Asn	
450						455					460					
Arg	Val	Leu	Glu	Gln	Leu	Ser	Arg	Val	Trp	Cys	Gln	Asn	Gln	Tyr	Arg	
465					470					475					480	
Ala	Ser	Leu	Met	Trp	Tyr	Glu	Leu	Ser	Lys	Ile	Asn	Pro	Thr	Ser	Val	
			485						490					495		
Met	Ser	Ala	Ile	Tyr	Gly	Arg	Pro	Val	Ser	Ala	Lys	Leu	Val	Gly	Asp	
		500						505					510			
Val	Val	Gln	Ile	Ser	Asp	Cys	Ile	Thr	Val	Asp	Gln	Glu	Ser	Val	Phe	
		515					520					525				
Val	His	Arg	Asn	Leu	Arg	Val	Pro	Gly	Ser	Lys	Asp	Leu	Cys	Tyr	Thr	
	530					535					540					
Arg	Pro	Val	Val	Gly	Phe	Lys	Phe	Ile	Asn	Gly	Ser	Glu	Leu	Phe	Val	
545					550					555					560	
Gly	Gln	Leu	Gly	Ala	Arg	Asn	Glu	Ile	Leu	Leu	Ser	Thr	Asn	Leu	Val	
				565					570					575		
Glu	Val	Cys	Gln	His	Ser	Cys	Glu	His	Tyr	Phe	Gln	Gly	Gly	Asn	His	
			580					585					590			
Ile	Tyr	Lys	Tyr	Lys	Asn	Tyr	Glu	Tyr	Val	Ser	Thr	Met	Asn	Leu	Thr	
		595					600					605				
Asp	Val	Pro	Thr	Leu	His	Thr	Met	Ile	Thr	Leu	Asn	Leu	Ser	Leu	Val	
	610					615					620					
Glu	Asn	Val	Asp	Phe	Gln	Val	Ile	Gln	Leu	Tyr	Ser	Gln	Lys	Glu	Lys	
625					630					635					640	
Lys	Leu	Ser	Asn	Val	Phe	Asp	Ile	Glu	Thr	Met	Phe	Arg	Glu	Tyr	Asn	
			645						650					655		
Tyr	Tyr	Thr	Gln	Asn	Leu	Lys	Gly	Leu	Arg	Lys	Asp	Leu	Asp	Asp	Ser	
			660					665					670			
Ile	His	Asp	Gly	Arg	Asp	Ser	Phe	Ile	Gln	Phe	Leu	Gly	Asp	Leu	Val	
		675					680					685				
Gln	Asp	Leu	Val	Pro	Val	Gly	Asp	Val	Ile	Val	Asn	Val	Ala	Ser	Gly	
	690					695					700					
Val	Phe	Ser	Leu	Phe	Gly	Ser	Ile	Val	Ser	Gly	Val	Ile	Ser	Phe	Leu	
705					710					715					720	
Lys	Asn	Pro	Leu	Gly	Ala	Ile	Leu	Thr	Ile	Ala	Leu	Ile	Val	Gly	Gly	
			725					730						735		
Ile	Ile	Val	Leu	Tyr	Leu	Phe	Ile	Thr	Arg	Ser	Arg	Thr	Val	Tyr	Gln	
			740					745					750			

Ala Pro Ile Arg Met Leu Tyr Pro Glu Val Asp Arg Ala Pro Gln Gln
755 760 765

Asn Val Gln Pro Ile Pro Glu Asp Gln Val Arg Ser Ile Leu Leu Ala
770 775 780

Met His Gln Phe Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln
785 790 795 800

Glu Glu His Thr Gln Arg Arg Ser Ile Phe Asp Thr Ile Arg Glu Ser
805 810 815

Thr Ser

<210> 45

<211> 830

<212> PRT

<213> Alcelaphine herpesvirus

<400> 45

Met Ala His Thr Gly Ser Thr Val Cys Ala Phe Leu Ile Phe Ala Val
1 5 10 15

Leu Lys Asn Val Phe Cys Gln Thr Pro Thr Ser Ser Ser Glu Val Glu
20 25 30

Asp Val Ile Pro Glu Ala Asn Thr Val Ser Asp Asn Ile Ile Arg Gln
35 40 45

Gln Arg Asn Asn Thr Ala Lys Gly Ile His Ser Asp Pro Ser Ala Phe
50 55 60

Pro Phe Arg Val Cys Ser Ala Ser Asn Ile Gly Asp Ile Phe Arg Phe
65 70 75 80

Gln Thr Ser His Ser Cys Pro Asn Thr Lys Asp Lys Glu His Asn Glu
85 90 95

Gly Ile Leu Leu Ile Phe Lys Glu Asn Ile Val Pro Tyr Val Phe Lys
100 105 110

Val Arg Lys Tyr Arg Lys Ile Val Thr Thr Ser Thr Ile Tyr Asn Gly
115 120 125

Ile Tyr Ala Asp Ala Val Thr Asn Gln His Val Phe Ser Lys Ser Val
130 135 140

Pro Ile Tyr Glu Thr Arg Arg Met Asp Thr Ile Tyr Gln Cys Tyr Asn
145 150 155 160

Ser Leu Asp Val Thr Val Gly Gly Asn Leu Leu Val Tyr Thr Asp Asn
165 170 175

Asp Gly Ser Asn Met Thr Val Asp Leu Gln Pro Val Asp Gly Leu Ser
180 185 190

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Asn	Ser	Val	Arg	Arg	Tyr	His	Ser	Gln	Pro	Glu	Ile	His	Ala	Glu	Pro	195	200	205	
Gly	Trp	Leu	Leu	Gly	Gly	Tyr	Arg	Arg	Arg	Thr	Thr	Val	Asn	Cys	Glu	210	215	220	
Val	Thr	Glu	Thr	Asp	Ala	Arg	Ala	Val	Pro	Pro	Phe	Arg	Tyr	Phe	Ile	225	230	235	240
Thr	Asn	Ile	Gly	Asp	Thr	Ile	Glu	Met	Ser	Pro	Phe	Trp	Ser	Lys	Ala	245	250	255	
Trp	Asn	Glu	Thr	Glu	Phe	Ser	Gly	Glu	Pro	Asp	Arg	Thr	Leu	Thr	Val	260	265	270	
Ala	Lys	Asp	Tyr	Arg	Val	Val	Asp	Tyr	Lys	Phe	Arg	Gly	Thr	Gln	Pro	275	280	285	
Gln	Gly	His	Thr	Arg	Ile	Phe	Val	Asp	Lys	Glu	Glu	Tyr	Thr	Leu	Ser	290	295	300	
Trp	Ala	Gln	Gln	Phe	Arg	Asn	Ile	Ser	Tyr	Cys	Arg	Trp	Ala	His	Trp	305	310	315	320
Lys	Ser	Phe	Asp	Asn	Ala	Ile	Lys	Thr	Glu	His	Gly	Lys	Ser	Leu	His	325	330	335	
Phe	Val	Ala	Asn	Asp	Ile	Thr	Ala	Ser	Phe	Tyr	Thr	Pro	Asn	Thr	Gln	340	345	350	
Thr	Arg	Glu	Val	Leu	Gly	Lys	His	Val	Cys	Leu	Asn	Asn	Thr	Ile	Glu	355	360	365	
Ser	Glu	Leu	Lys	Ser	Arg	Leu	Ala	Lys	Val	Asn	Asp	Thr	His	Ser	Pro	370	375	380	
Asn	Gly	Thr	Ala	Gln	Tyr	Tyr	Leu	Thr	Asn	Gly	Gly	Leu	Leu	Leu	Val	385	390	395	400
Trp	Gln	Pro	Leu	Val	Gln	Gln	Lys	Leu	Leu	Asp	Ala	Lys	Gly	Leu	Leu	405	410	415	
Asp	Ala	Val	Lys	Lys	Gln	Gln	Asn	Thr	Thr	Thr	Thr	Thr	Thr	Thr	Thr	420	425	430	
Arg	Ser	Arg	Arg	Gln	Arg	Arg	Ser	Val	Ser	Ser	Gly	Ile	Asp	Asp	Val	435	440	445	
Tyr	Thr	Ala	Glu	Ser	Thr	Ile	Leu	Leu	Thr	Gln	Ile	Gln	Phe	Ala	Tyr	450	455	460	
Asp	Thr	Leu	Arg	Ala	Gln	Ile	Asn	Asn	Val	Leu	Glu	Glu	Leu	Ser	Arg	465	470	475	480
Ala	Trp	Cys	Arg	Glu	Gln	His	Arg	Ala	Ser	Leu	Met	Trp	Asn	Glu	Leu	485	490	495	

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Ser	Lys	Ile	Asn	Pro	Thr	Ser	Val	Met	Ser	Ser	Ile	Tyr	Gly	Arg	Pro	500	505	510	
Val	Ser	Ala	Lys	Arg	Ile	Gly	Asp	Val	Ile	Ser	Val	Ser	His	Cys	Val	515	520	525	
Val	Val	Asp	Gln	Asp	Ser	Val	Ser	Leu	His	Arg	Ser	Met	Arg	Val	Pro	530	535	540	
Gly	Arg	Asp	Lys	Thr	His	Glu	Cys	Tyr	Ser	Arg	Pro	Pro	Val	Thr	Phe	545	550	555	560
Lys	Phe	Ile	Asn	Asp	Ser	His	Leu	Tyr	Lys	Gly	Gln	Leu	Gly	Val	Asn	565	570	575	
Asn	Glu	Ile	Leu	Leu	Thr	Thr	Thr	Ala	Val	Glu	Ile	Cys	His	Glu	Asn	580	585	590	
Thr	Glu	His	Tyr	Phe	Gln	Gly	Gly	Asn	Asn	Met	Tyr	Phe	Tyr	Lys	Asn	595	600	605	
Tyr	Arg	His	Val	Lys	Thr	Met	Pro	Val	Gly	Asp	Val	Ala	Thr	Leu	Asp	610	615	620	
Thr	Phe	Met	Val	Leu	Asn	Leu	Thr	Leu	Val	Glu	Asn	Ile	Asp	Phe	Gln	625	630	635	640
Val	Ile	Glu	Leu	Tyr	Ser	Arg	Glu	Glu	Lys	Arg	Met	Ser	Thr	Ala	Phe	645	650	655	
Asp	Ile	Glu	Thr	Met	Phe	Arg	Glu	Tyr	Asn	Tyr	Tyr	Thr	Gln	Arg	Val	660	665	670	
Thr	Gly	Leu	Arg	Arg	Asp	Leu	Thr	Asp	Leu	Ala	Thr	Asn	Arg	Asn	Gln	675	680	685	
Phe	Val	Asp	Ala	Phe	Gly	Ser	Leu	Met	Asp	Asp	Leu	Gly	Val	Val	Gly	690	695	700	
Lys	Thr	Val	Leu	Asn	Ala	Val	Ser	Ser	Val	Ala	Thr	Leu	Phe	Ser	Ser	705	710	715	720
Ile	Val	Ser	Gly	Ile	Ile	Asn	Phe	Ile	Lys	Asn	Pro	Phe	Gly	Gly	Met	725	730	735	
Leu	Leu	Phe	Gly	Leu	Ile	Ala	Ala	Val	Val	Ile	Thr	Val	Ile	Leu	Leu	740	745	750	
Asn	Arg	Lys	Ala	Lys	Arg	Phe	Ala	Gln	Asn	Pro	Val	Gln	Met	Ile	Tyr	755	760	765	
Pro	Asp	Ile	Lys	Thr	Ile	Thr	Ser	Gln	Arg	Glu	Glu	Leu	Gln	Val	Asp	770	775	780	
Pro	Ile	Ser	Lys	His	Glu	Leu	Asp	Arg	Ile	Met	Leu	Ala	Met	His	Asp	785	790	795	800

<213> artificial

<220>

<223> Suid herpesvirus 1 - bases 641-1300

<400> 47

cgccgccg	cggtccac	gtggtgcg	tgagcccg	gcaggcct	cccagtag	60
cgaggggc	caacttcac	gaggggat	ccgtgtct	caaggaga	atcgcccc	120
acaagttca	ggccacat	tactaca	acgtcatc	cacgaccg	tggtccgg	180
gcacgtac	ggccatc	aaccgctt	cagaccgc	gcccgtcc	gtgcagg	240
tcacggac	gatcgacc	cgcgga	gcgtctcc	ggccgagt	gtgcgaca	300
accacaagg	gaccgcct	gaccgcg	agaacccg	cgagggtg	ctgcgccc	360
cgcgctg	cgcgctcg	acccgcgg	ggcacacc	caacgac	tacacca	420
tcggcgcc	gggcttct	cacacggg	cctccgtc	ctgcatcg	gaggaggt	480
aggcgcg	cgtgtaccc	tacgactc	tcgccctg	cacggggg	attgtgt	540
tgtcccc	ctacggcc	cgcgaggg	cccacggg	gcacatcg	tacgcgcc	600
ggcgctt	gcaggtgg	cactact	ccatcgac	ggactcgc	ctccgcgc	660

<210> 48

<211> 359

<212> PRT

<213> artificial

<220>

<223> Suid herpesvirus 1 - bases 491-850

<400> 48

Ala	Ala	Pro	Ala	Ala	Ala	Arg	Arg	Ala	Arg	Arg	Ser	Pro	Gly	Pro	Ala	
1			5					10						15		
Gly	Thr	Pro	Glu	Pro	Pro	Ala	Val	Asn	Gly	Thr	Gly	His	Leu	Arg	Ile	
			20					25					30			
Thr	Thr	Gly	Ser	Ala	Glu	Phe	Ala	Arg	Leu	Gln	Phe	Thr	Tyr	Asp	His	
		35					40					45				
Ile	Gln	Ala	His	Val	Asn	Asp	Met	Leu	Gly	Arg	Ile	Ala	Ala	Ala	Trp	
	50					55					60					
Cys	Glu	Leu	Gln	Asn	Lys	Asp	Arg	Thr	Leu	Trp	Ser	Glu	Met	Ser	Arg	
	65				70					75					80	
Leu	Asn	Pro	Ser	Ala	Val	Ala	Thr	Ala	Ala	Leu	Gly	Gln	Arg	Val	Ser	
				85					90						95	
Ala	Arg	Met	Leu	Gly	Asp	Val	Met	Ala	Ile	Ser	Arg	Cys	Val	Glu	Val	
			100					105					110			
Arg	Gly	Gly	Val	Tyr	Val	Gln	Asn	Ser	Met	Arg	Val	Pro	Gly	Glu	Arg	
			115				120					125				
Gly	Thr	Cys	Tyr	Ser	Arg	Pro	Leu	Val	Thr	Phe	Glu	His	Asn	Gly	Thr	
	130					135					140					
Gly	Val	Ile	Glu	Gly	Gln	Leu	Gly	Asp	Asp	Asn	Glu	Leu	Leu	Ile	Ser	
	145				150					155					160	

<212> PRT
 <213> Suid herpesvirus 2

<400> 50
 Ser Ile Met Ile Ala Asn Asn Leu Cys Tyr Ser Thr Leu Ile Leu Asn
 1 5 10 15
 Asp Glu Asp Val Thr Gly Ile Asp Glu Lys Asp Ile Leu Thr Val His
 20 25 30
 Val Asn Lys Asn Thr Val Tyr Arg Phe Val Arg Ser Ser Val Arg Glu
 35 40 45
 Ser Ile Leu Gly Thr Leu Leu Ser Arg Trp Leu Arg Lys Arg Lys Glu
 50 55 60
 Val Lys Ala Arg Met Lys Arg Cys Glu Asp Pro Met Leu Ala Leu Ile
 65 70 75 80
 Leu Asp Lys Gln Gln Leu Ala Leu Lys Val Thr Cys Asn Ala Phe Tyr
 85 90 95
 Gly Phe Thr Gly Ala Val His Gly Leu Leu Pro Cys Leu Pro Leu Ala
 100 105 110
 Ala Ser Ile Thr Ser Ile Gly Arg Asp Met Leu Arg Gln Thr Ser Asp
 115 120 125
 Phe Ile Asn Asn Val Leu Ser Ser Arg Glu Tyr Val Ser Glu Lys Phe
 130 135 140
 Ser Leu Ser Asp Gly Asp Phe Gln Gly Asp Phe Ser Pro Glu Cys
 145 150 155

<210> 51
 <211> 466
 <212> DNA
 <213> artificial

<220>
 <223> Portion of porcine gamma herpesvirus polymerase - AF118399

<400> 51
 taatctatgt cactctaccc taatccatca tgaagacctg cataaatatc ctcaattaaa 60
 ggaggaggat tatgaaacat ttttgattag ttctggctct gttcactttg taaaaaaaca 120
 catatcagaa tctcttctgt ctaacctgct tacaacatgg ctggctaaga gaaaaatgat 180
 cagaaaggaa ttagcagcat gtgctgacct aaagctcagg acaatttttag ataaacagca 240
 gcttgcaatt aaggtgacat gcaatgctgt gtatgggttc actggtggtg catctggtat 300
 gctgccctgt ctcaagattg cagagaccat aactatgcaa ggaagggcca tgttgaaaaa 360
 gacaaaagta tttgtagaga atttaagtca tgaggatctc cattccatct gtaagggttg 420
 ctttatgcct cagtcaccaa acagcattga taaacccttc aaggtg 466

<210> 52
 <211> 423
 <212> DNA
 <213> artificial

<220>

<223> Portion of porcine gamma herpesvirus polymerase - AF118401

<400> 52

gaggacctgc	ataagtatcc	tcaattaaag	gaggatgatt	atgaaacatt	tttgattagt	60
tctggccctg	ttcactttgt	aaaaaaacac	atatacagaat	ctcttctgtc	gaacttgctc	120
acaacatggc	tgccaagag	aaaaatgac	agaaaggaat	tgacagcatg	tgctgatcca	180
aagctcagga	caattttaga	taaacagcag	cttgcaatta	aggtgacatg	caatgctgtg	240
tatggattca	ctgggtgttg	atctggtatg	ctgccatgtc	tcaagattgc	agagaccatc	300
actatgcaag	gaagggccat	gttggaag	acaaaagtat	ttgtagagaa	tctgagtcac	360
gaagatctcc	gttccatag	taagggtggc	tctatacctc	agtcacaaa	cgtgtttgat	420
aaa						423

<210> 53

<211> 292

<212> DNA

<213> artificial

<220>

<223> Portion of Acelaphine herpesvirus.

<400> 53

aagtaataga	actatactct	agagaagaga	agaggatgag	cactgcattt	gatatagaga	60
ccatgtttag	agaatacaac	tactacacac	agagggtcac	tgccctgcgg	agggacttga	120
cagacctagc	tacaaacaga	aatcaatttg	tagatgcctt	tgccagcctc	atggacgact	180
tgggggtcgt	ggggaaaacg	gtgttgatg	ctgtgagcag	tgtggccaca	ctcttcagct	240
ctatagtctc	agggatcatc	aatttcatta	aaaaccctt	tgggggaatg	tt	292

<210> 54

<211> 152

<212> DNA

<213> artificial

<220>

<223> Portion of Acelaphine herpesvirus.

<400> 54

tggtgccgtg	agcagcaccg	agcctctctc	atgtggaacg	agctaagcaa	aatcaaccct	60
accagtgtga	tgagctctat	ataggggcgg	ccagtatctg	ccaaaagaat	tgagatgtg	120
atatctgtct	ctcactgtgt	ggtggtggac	ca			152

<210> 55

<211> 793

<212> PRT

<213> artificial

<220>

<223> Portion of Acelaphine herpesvirus.

<400> 55

Lys	Gly	Ile	His	Ser	Asp	Pro	Ser	Ala	Phe	Pro	Phe	Arg	Val	Cys	Ser
1				5					10					15	

Leu Ala Lys Val Asn Asp Thr His Ser Pro Asn Gly Thr Ala Gln Tyr
 325 330 335
 Tyr Leu Thr Asn Gly Gly Leu Leu Leu Val Trp Gln Pro Leu Val Gln
 340 345 350
 Gln Lys Leu Leu Asp Ala Lys Gly Leu Leu Asp Ala Val Lys Lys Gln
 355 360 365
 Gln Asn Thr Thr Thr Thr Thr Thr Thr Arg Ser Arg Arg Gln Arg
 370 375 380
 Arg Ser Val Ser Ser Gly Ile Asp Asp Val Tyr Thr Ala Glu Ser Thr
 385 390 395 400
 Ile Leu Leu Thr Gln Ile Gln Phe Ala Tyr Asp Thr Leu Arg Ala Gln
 405 410 415
 Ile Asn Asn Val Leu Glu Glu Leu Ser Arg Ala Trp Cys Arg Glu Gln
 420 425 430
 His Arg Ala Ser Leu Met Trp Asn Glu Leu Ser Lys Ile Asn Pro Thr
 435 440 445
 Ser Val Met Ser Ser Ile Tyr Gly Arg Pro Val Ser Ala Lys Arg Ile
 450 455 460
 Gly Asp Val Ile Ser Val Ser His Cys Val Val Val Asp Gln Asp Ser
 465 470 475 480
 Val Ser Leu His Arg Ser Met Arg Val Pro Gly Arg Asp Lys Thr His
 485 490 495
 Glu Cys Tyr Ser Arg Pro Pro Val Thr Phe Lys Phe Ile Asn Asp Ser
 500 505 510
 His Leu Tyr Lys Gly Gln Leu Gly Val Asn Asn Glu Ile Leu Leu Thr
 515 520 525
 Thr Thr Ala Val Glu Ile Cys His Glu Asn Thr Glu His Tyr Phe Gln
 530 535 540
 Gly Gly Asn Asn Met Tyr Phe Tyr Lys Asn Tyr Arg His Val Lys Thr
 545 550 555 560
 Met Pro Val Gly Asp Val Ala Thr Leu Asp Thr Phe Met Val Leu Asn
 565 570 575
 Leu Thr Leu Val Glu Asn Ile Asp Phe Gln Val Ile Glu Leu Tyr Ser
 580 585 590
 Arg Glu Glu Lys Arg Met Ser Thr Ala Phe Asp Ile Glu Thr Met Phe
 595 600 605
 Arg Glu Tyr Asn Tyr Tyr Thr Gln Arg Val Thr Gly Leu Arg Arg Asp
 610 615 620

Leu Thr Asp Leu Ala Thr Asn Arg Asn Gln Phe Val Asp Ala Phe Gly
625 630 635 640

Ser Leu Met Asp Asp Leu Gly Val Val Gly Lys Thr Val Leu Asn Ala
645 650 655

Val Ser Ser Val Ala Thr Leu Phe Ser Ser Ile Val Ser Gly Ile Ile
660 665 670

Asn Phe Ile Lys Asn Pro Phe Gly Gly Met Leu Leu Phe Gly Leu Ile
675 680 685

Ala Ala Val Val Ile Thr Val Ile Leu Leu Asn Arg Lys Ala Lys Arg
690 695 700

Phe Ala Gln Asn Pro Val Gln Met Ile Pro Asp Ile Lys Thr Ile Thr
705 710 715 720

Ser Gln Arg Glu Glu Leu Gln Val Asp Pro Ile Ser Lys His Glu Leu
725 730 735

Asp Arg Ile Met Leu Ala Met His Asp Tyr His Ala Ser Lys Gln Pro
740 745 750

Glu Ser Lys Gln Asp Glu Glu Gln Gly Ser Thr Thr Ser Gly Pro Ala
755 760 765

Asp Leu Asn Lys Ala Lys Asn Val Leu Arg Arg Arg Ala Gly Tyr Lys
770 775 780

Pro Leu Lys Arg Thr Asp Ser Phe Glu
785 790

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